

REMARKS

Claims 1-16 are pending in the application and have been examined. Claims 1-16 stand rejected. Applicant respectfully requests reconsideration and allowance of Claims 1-16 in view of the following remarks.

The Rejection of Claims 1-6 and 10-16 Under 35 U.S.C. § 103(a) as Being Unpatentable Over Radwan et al. (*New Forests* 3:21-30 (1989)) in View of Saul et al. (*Forest Research Note No. 33 (1982)*)

Claims 1-6 and 10-16 stand rejected under 35 USC § 103(a) as being unpatentable over Radwan et al., *New Forests* 3: 21-30 (1989) in view of Saul et al., *Forest Research Note No. 33 (1982)*. Applicant respectfully traverses the rejection for the following reasons.

As an initial matter, applicant wishes to point out that Claim 1, from which Claims 2-6 and 10-16 depend, is directed to a method for promoting the growth of shoots from a log. The method comprises the step of applying a fertilizer solution that comprises less than about 0.01% (w/v) nitrogen, to a member of the group consisting of an Alder log, a Beech log and a Birch log, in an amount sufficient to promote the growth of shoots from the log. As described in the specification, "Alder, Beech or Birch logs that are useful in the practice of the present invention are typically between twelve and twenty four inches long, typically have a diameter between one inch and two inches, and typically have a generally cylindrical shape. Alder, Beech or Birch logs are preferably cut from the lower, healthy branches of an Alder, Beech or Birch tree, although cut logs from upper branches may also be used." (Specification, page 3, lines 9-13.) Applicant submits that none of the cited references relates to a method for promoting the growth of shoots from a log as claimed.

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The Examiner sets forth the position that the Radwan et al. reference teaches a method for promoting growth of shoots comprising applying fertilizer solution that comprises less than about 0.01% (w/v) nitrogen from an Alder. The Examiner acknowledges that Radwan et al. is silent as to the use of a log. However, the Examiner cites Saul et al. as disclosing the use of a log as a source of propagation. The Examiner concludes it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Radwan et al. by using the log of Saul et al. to have a practical way of propagating cuttings of Alder with both shoots and roots so as to increase the developmental speed of improved genotypes. Applicant respectfully disagrees with the Examiner's conclusions.

Applicant submits that the Examiner has failed to establish a *prima facie* case of obviousness. Three requirements are listed in the M.P.E.P. § 706.02(j) for establishing a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

For the reasons set forth in detail below, applicant respectfully submits that the burden of establishing a *prima facie* case of obviousness has not been met. First, there is no suggestion to combine or modify the references' teachings to arrive at the claimed invention. Second, because the cited references teach away from the claimed invention, there can be no reasonable expectation of success for their combined teachings, deficient or otherwise. Third, because of

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the deficiencies of the teachings of the cited references, their combined teachings fail to teach or suggest all the recited claim elements.

The Examiner cites Radwan et al. as disclosing a method for promoting growth of shoots ("vigorous new shoots," top paragraph, page 23) comprising applying fertilizer solution ("intermittent overhead mist," second paragraph, page 24) that comprises less than about 0.01% (w/v) nitrogen from an Alder. Applicant respectfully submits that the Examiner has mischaracterized the teachings of the Radwan et al. reference. Applicant submits that Radwan et al. does not teach or suggest the method of Claim 1 for the following reasons. First, the passage relied on by the Examiner refers to the growth of "vigorous new shoots," which was promoted by the application of fertilizer solution containing greater than 0.01% nitrogen (w/v) fertilizer on living trees, followed by pruning and girdling the trees:

[E]ach tree was fertilized with 2 kg of a 10-20-20 commercial fertilizer.

The mature trees were girdled around half the circumference at several points along the bole to encourage formation of epicormic sprouts, and the younger trees were pruned to simulate production of vigorous shoots.

(Radwan, top of page 23).

Therefore, applicant submits that Radwan et al. actually teaches away from the claimed invention by teaching the use of a fertilizer with greater than 0.01% nitrogen (2 kg of a 10-20-20 commercial fertilizer) and the use of girdling or pruning to encourage the formation of epicormic sprouts on a tree.

Second, the Examiner cites "intermittent overhead mist" as disclosing a fertilizer solution being applied to promote the growth of shoots. As described in the specification, "[f]ertilizers useful in the practice of the present invention typically also include potassium and phosphorous and may optionally contain copper which is both a nutrient and an anti-fungal agent."

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(Specification, page 3, lines 27-29). In contrast, the cited reference does not describe the "overhead mist" as containing a fertilizer. Moreover, applicant submits that the references teach that the "intermittent mist" was applied to aid the development of roots on the cuttings. As stated starting in the second paragraph on page 24, the "intermittent overhead mist" was applied to cuttings that "were inserted 2-4 cm into a moist rooting mixture of vermiculate and perlite (1:1 v/v) placed in the bottom of a mist chamber." The "cuttings" are obtained in Radwan et al. from "new shoots and epicormic sprouts." (Radwan et al., page 23, first paragraph.) Therefore, because the Radwan et al. reference discloses methods of promoting growth of shoots from an Alder tree, comprising applying a fertilizer containing greater than 0.01% nitrogen to the tree, followed by girdling or pruning to encourage the formation of epicormic sprouts, the cited reference teaches away from the claimed invention.

The deficiencies of the teachings of Radwan et al. are not cured by the teaching of Saul et al., or any one or more of the other references cited by the Examiner, as further described below.

The Examiner cites Saul et al. as teaching the use of a log ("cuttings" of Saul et al.) as a source for propagation. The Examiner then concludes it would have been obvious to modify the method of Radwan et al. by using a log as disclosed by Saul et al. Saul et al. discloses the vegetative propagation of Alder by use of rooted cuttings (see, e.g., Saul et al., pages 1-2). Saul et al. does not teach or suggest a method of promoting the growth of shoots from a log comprising the step of applying a fertilizer solution that comprises less than 0.01% (w/v) nitrogen, as required by Claim 1. Even assuming, without conceding, that Saul teaches the use of a log, even if one were to modify the method of Radwan et al. by including a log, the above noted deficiencies would preclude one from arriving at the claimed invention.

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In summary, applicant submits that neither Radwan et al. nor Saul et al. teaches, suggests, or provides any motivation to make or otherwise render obvious the claimed invention. Accordingly, applicant respectfully requests removal of this ground of rejection.

The Rejection of Claims 7-9 Under 35 U.S.C. § 103(a) as Being Unpatentable Over Radwan et al. in View of Saul et al. in Further View of Huss-Danell (*Physiol. Plant* 49(2):113-116, (1980))

Claims 7-9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Radwan et al., *New Forests* 3:21-30 (1989) in view of Saul et al., *Forest Research Note No. 33* (1982) in further view of Huss-Dannell, *Physiol. Plant* 49(2):113-116, 1980. Applicant respectfully disagrees.

For the reasons set forth above in response to the Examiner's rejection of Claims 1-6 and 10-16 under 35 U.S.C. § 103(a), applicant submits that neither the Radwan et al. publication nor the Saul et al. reference teaches or suggests a method for promoting the growth of shoots from a log comprising applying a fertilizer solution that comprises less than about 0.01% (w/v) nitrogen to the log. These deficiencies are not cured by the teachings of Huss-Danell that disclose conditions for promoting rooting of cuttings. Applicant submits that none of the cited references, either alone or in any combination, teaches or suggests a method for promoting the growth of shoots from Alder logs as claimed.

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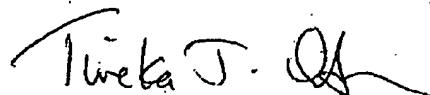
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Consequently, applicant submits that the subject matter of Claims 7-9 is not obvious in view of the teachings of Radwan et al., Saul et al., and Huss-Danell et al. Accordingly, applicant respectfully requests removal of this ground of rejection.

Respectfully submitted,

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